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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	SMITH ET AL.
Application No.:	09/919,193
Filing Date:	08/01/01
For:	METHOD AND SYSTEM FOR INFORMATION DEVELOPMENT AND ACCESS
Art Unit:	UNKNOWN

TRANSMITTAL OF PRIORITY DOCUMENT

Director for Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Enclosed herewith is a certified copy of British Patent Application No. 0018839.1 for which the above-identified patent application claims priority from.

If, for any reason, this priority document is not acceptable, please inform the undersigned as soon as possible.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

Date: 09/27/01

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Date of Deposit: September 27, 2001
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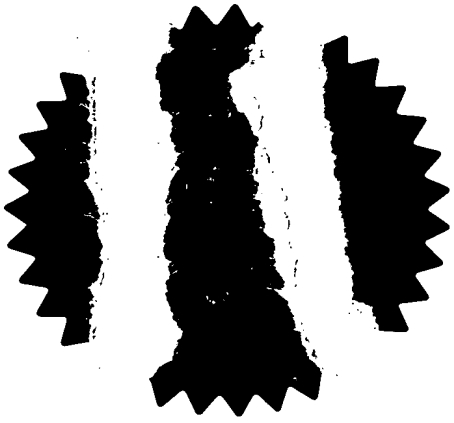

Signed

Dated 30 JUL 2001

Patents Form 1/77
Patents Act 1977
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THE PATENT OFFICE
G
02 AUG 2000
RULE 97
NEWPORT

The Patent Office

02AUG00 E557535 5 D00246
P01/7700 0.00-0018839.1

1/77

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
Newport
Gwent NP9 1RH

1. Your reference — GW-G30304

2. Patent application number
(The Patent Office will fill in this part) — 02 AUG 2000 — **0018839.1**

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

The Salamander Organisation Ltd

The Innovation Centre
York Science Park
York

Patents ADP number *(if you know it)* 7600510001

If the applicant is a corporate body, give the country/state of its incorporation — **U.K**

4. Title of the invention — **Method for Process-Driven Knowledge Activation**

5. Name of your agent *(if you have one)* — **Bailey Walsh & Co.**

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*

5, York Place
Leeds
LS1 2SD

Patents ADP number *(if you know it)* — **224001**

6. If you are declaring priority from one or more earlier patent applications, give the and the date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country	Priority application number *(if you know it)*	Date of filing *(day / month / years)*

7. If this application is divided or otherwise derived from an earlier UK application, the earlier application

Number of earlier application	Date of filing *(day / month / years)*

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer "Yes" if:*

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body

See note (d)

Yes

Patents Form 1/77

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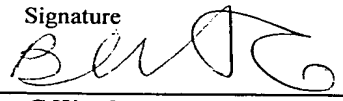
Continuation sheets of this form	
Description	8
Claim(s)	
Abstract	
Drawing(s)	5 + 5 / 4

10. If you are also filing any of the following, state how many of each item.

Priority Documents	
Translations of priority documents	
Statement of inventorship and right to grant of a patent *(Patents Form 7/77)*	
Request for preliminary examination and search *(Patents Form 9/77)*	
Request for substantive examination *(Patents Form 10/77)*	
Any other documents *(Please specify)*	

11. I/We request the grant of a patent on the basis of this application

Signature 

Date 01.06.00

12. Name and daytime telephone number of person to contact in the United Kingdom

G Wood
0113 2433824

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c) *If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.*

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Method For Process-Driven Knowledge Activation

The present invention relates to a method for constructing a process-driven knowledge activation system, and more particularly to a method for the development of business process models for distribution through web browsers, and the provision of access to relevant managed knowledge resources at appropriate points within said models.

Process models are increasingly used to define best practice within a business and to communicate this to those associated with the business, with the potential benefit of enhanced business performance and the reduction in risk of failures of adherence to best practise, whether that best practise is defined within the organisation or by a regulatory body.

Alongside process models describing best practice processes and the resources that these require in order to be delivered, businesses will evolve a body of documentation, guidelines, policies and rules concerning the delivery of said processes. This body constitutes the organisation's knowledge resource that distinguishes its delivery of a process from another organisation's delivery of the same process. We coin the term knowledge activation to describe the linkage of resources as described within a process model to their counterparts within this body of organisational knowledge.

Prior art is cited in the area of business process modelling. This work gives the ability to describe process, and describe the knowledge resource requirements of a business, but gives no managed linkage, via the processes that make the organisation work, to the knowledge resources created around an organisation. Prior art can also be cited in the area of document management that

provides mechanisms for the storage, cataloguing and retrieval of electronic resources, but carried out with no process context.

Two key improvements in this area offered by said activation are the tailoring of a business process model more closely to the way in which the business delivers its processes, and the access to said resources at the points in a process where they are required by people following said process. The effect that achieves these improvements is the clicking by a user at a process in the organisational model, said click revealing the knowledge resources required at that point. Each resource is presented to the user through a click on a symbol or named link that represents a specific required resource, followed by the delivery of said resource to said user.

Moreover, said activation provides a mechanism whereby the distributed and evolutionary aspects of the organisation's knowledge resources can be hidden from the users of said resources through the mechanism of accessing resources from their representation within said process models or their definitions, rather than directly through a file store.

Furthermore, said activation provides the traceability of the usage of knowledge resources throughout the organisation as an aid to knowledge resource management and auditability.

According to the present invention there is provided a method for creating a process-driven knowledge activation system, said method comprising the following steps:

- creating a process model of a system comprising one or more elements being part of a general purpose graphical business model, said model created in a browser-compatible format

- associating at points within processes in said model a collection of symbols representing the resources that will be required by its user to be effective, the usage of said symbols across the model being auditable and traceable through a mechanism of dependency analysis within the modelling tool
- mapping said symbols to electronic knowledge resources stored in a file store
- generating a process-driven knowledge activation system comprising said one or more symbols or named links associated with said processes linked to said knowledge resources

said system revealing to the user, on clicking on a process, the associated knowledge resource symbols, the appropriate resource then being presented to the user on the click of said symbols or links.

In one embodiment the process model is part of a set of general purpose graphical business models and the process model can be accessible via a web browser.

In one embodiment the one or more elements of the process model are provided in a tool which uniquely identifies each element and maps each element to the one or more knowledge resources. Typically the one or more knowledge resources can be in the form of arbitrary alternative web pages and/or web-based resources and can be accessed by the user selection of one or more of the process model symbols or links.

Preferably the process model is illustrated on a display screen and the elements can be selected by any conventional PC based user control system.

In one embodiment the knowledge resource symbols can be queried within a tool to ascertain for each the set of processes with a requirement on said symbol's corresponding resource, so facilitating a process of resource change management.

In one embodiment the knowledge resources are accessed by the user selection of one or more of the symbols representing these resources from within a process model or definition. Typically the process model or definition is illustrated on a display screen and the elements can be selected by any conventional user control system such as mouse, keyboard etc. (and in the future – voice) and when an element is selected an appropriate display is generated for any associated knowledge resource.

In use, a modeller/user follows the method described above to create a set of general purpose graphical business models containing various linked elements in a tool, said tool able to generate models which are accessible by a web browser and which links the knowledge resource symbols in the browser by uniquely identifying each element and corresponding web page. The preferred embodiment of the invention, maps knowledge resource symbols (associated with a process that requires them) to their corresponding knowledge resources using a mechanism based on that described in the applicant's co-pending patent application for Process-Driven Information Systems.

The advantage of the present invention is that it provides a method for creating a process driven knowledge activation system that can communicate and disseminate arbitrary business intent, additionally providing access to a managed body of organisational knowledge resources at appropriate points in the process models describing said intent. The method allows non-technical users to rapidly create process models that describe the working of an organisation. The

models can be used to access the resources that said users and others create in the course of their business work, and that characterise the delivery of said processes by that organisation.

Specific embodiments of the invention will now be described with reference to the accompanying Figures wherein:

Figure 1 represents an embodiment of the architecture of the apparatus of the present invention. A Repository is accessed through a data source name by the modelling tool Business Developer, with which process models and modelling elements representing knowledge resources are created and associated. The publishing tool Web Publisher creates a set of web pages for these models. The activation tool Knowledge Activation links resources from the Knowledge Centre (an electronic library of knowledge resources mapped to by the symbolic knowledge resources elements held within the Repository) to the web pages for process models that have been defined in Business Developer to require these resources. A web browser is used to browse process models and gain access to the sets of resources associated with each process;

Figure 2 shows a screen display of a definition window for the process 'Engage with Customer' developed using a process modelling tool, "MooD Business Developer", to which a symbols representing knowledge resources have been added;

Figure 3 shows a screen display of the 'Engage with Customer; process utilising a process model in accordance with the invention, complete with a generated link to the knowledge resources defined in the process modelling tool, along with a figurative illustration of the effect of a click on said links;

Figure 4 shows a screen display of the 'Receive and Record Request' process complete with symbols representing knowledge resources, along with a figurative illustration of the effect of a click on said links;

Figure 5 shows a screen display of the collection of knowledge resources as defined in the Business Developer tool, with a following through of the dependencies for on of the resources, listing the processes that require this resource.

In the following description, an example of the method according to the invention is referred to as "Knowledge Activation". The underlying concept of Knowledge Activation is to link process models with a Knowledge Centre into which users can store and organise knowledge resources for subsequent search and retrieval through the business process models, presenting a consistent operating interface to these resources for people associated with the business workers. A preferred embodiment of Knowledge Activation is as follows:

1. A modelling team creates a set of process models representing the business using a modelling tool which generates browser-compatible outputs, also associating with these process models symbols representing the knowledge resources (e.g. documentation, guidelines, policies and rules) that characterise the delivery of these processes in this business, using the dependency analysis of the modelling tool to audit and trace resource utilisation;

2. Those people responsible for the knowledge resources identified in step 1 organise and store these resources in a Knowledge Centre (or other accessible electronic storage),

which can additionally be a distributed Knowledge Centre across many physical locations;

3. The apparatus of this invention, which incorporates the apparatus of the invention 'Process Driven Information Systems' is used to create a mapping between knowledge resource symbols and the knowledge resources, said mapping being stored and used to modify the collection of web pages appropriately;

4. The resulting Process Driven Knowledge Activation System is published to the user community;

5. The above 4 steps are periodically repeated in a review cycle in which the process models and resources of the Process Driven Knowledge Activation System are revised and re-published.

Thus the present invention provides a method for creating a process-based information system giving access to relevant knowledge resources at the appropriate points within a process where those knowledge resources are required. The method comprises the steps of creating a process model or models comprising one or more elements which are available in a browser-compatible format, associating these processes with one or more symbols representing the knowledge resources that characterise their delivery, storing and organising one or more knowledge resources which are accessible in a browser compatible format, and generating a process-driven knowledge activation system comprising one or more knowledge resource symbols or links associated with a process model or definition which act as the user interface to the one or more knowledge resources. This method allows the rapid creation by non-technical users of process models describing the working of an organisation, the models being used as a means of

accessing in context the body of organisational knowledge that distinguishes its delivery of a process from another organisation's delivery of the same process, with associated benefits in the management and traceability of a distributed, evolving body of organisational knowledge.

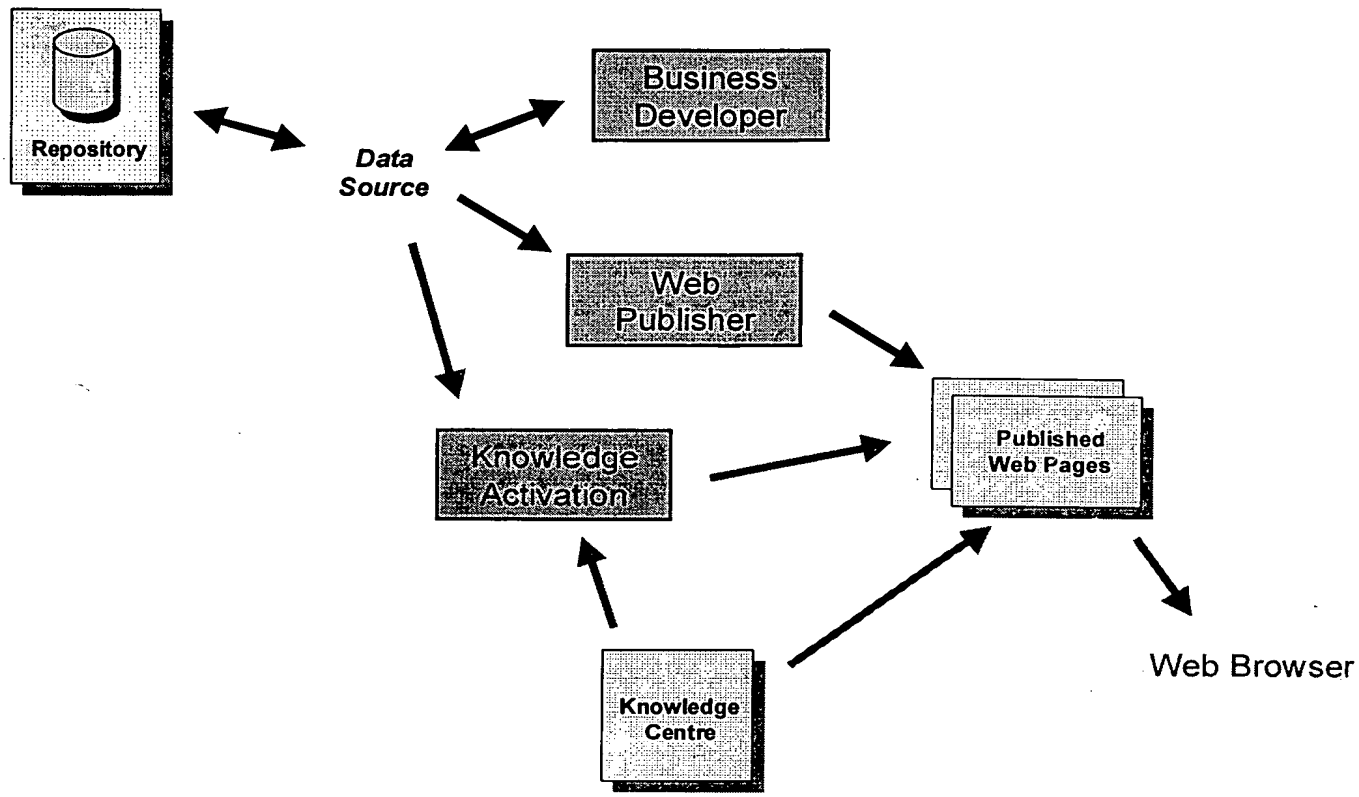
Repository
Data Source
Business Developer
Web Publisher
Knowledge Activation
Published Web Pages
Web Browser
Knowledge Centre

Figure 1

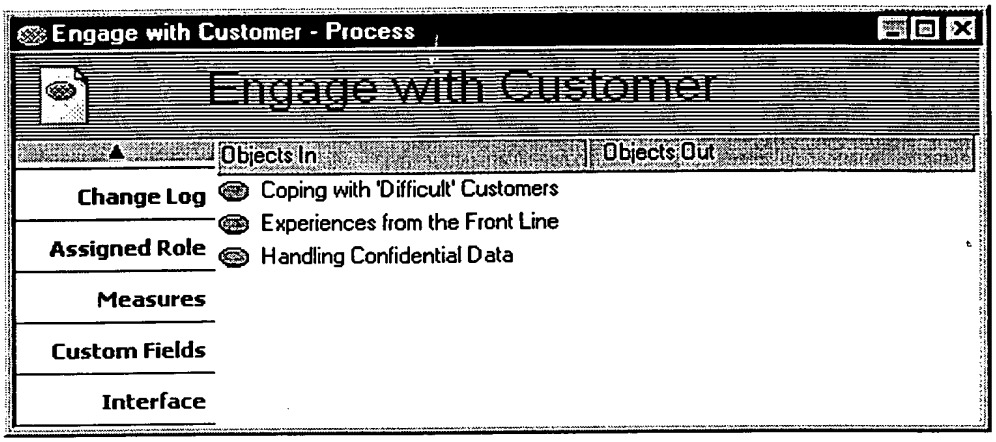
Engage with Customer - Process
Engage with Customer
Objects In
Objects Out
Change Log
Assigned Role
Measures
Custom Fields
Interface
Coping with 'Difficult' Customers
Experiences from the Front Line
Handling Confidential Data

Figure 2

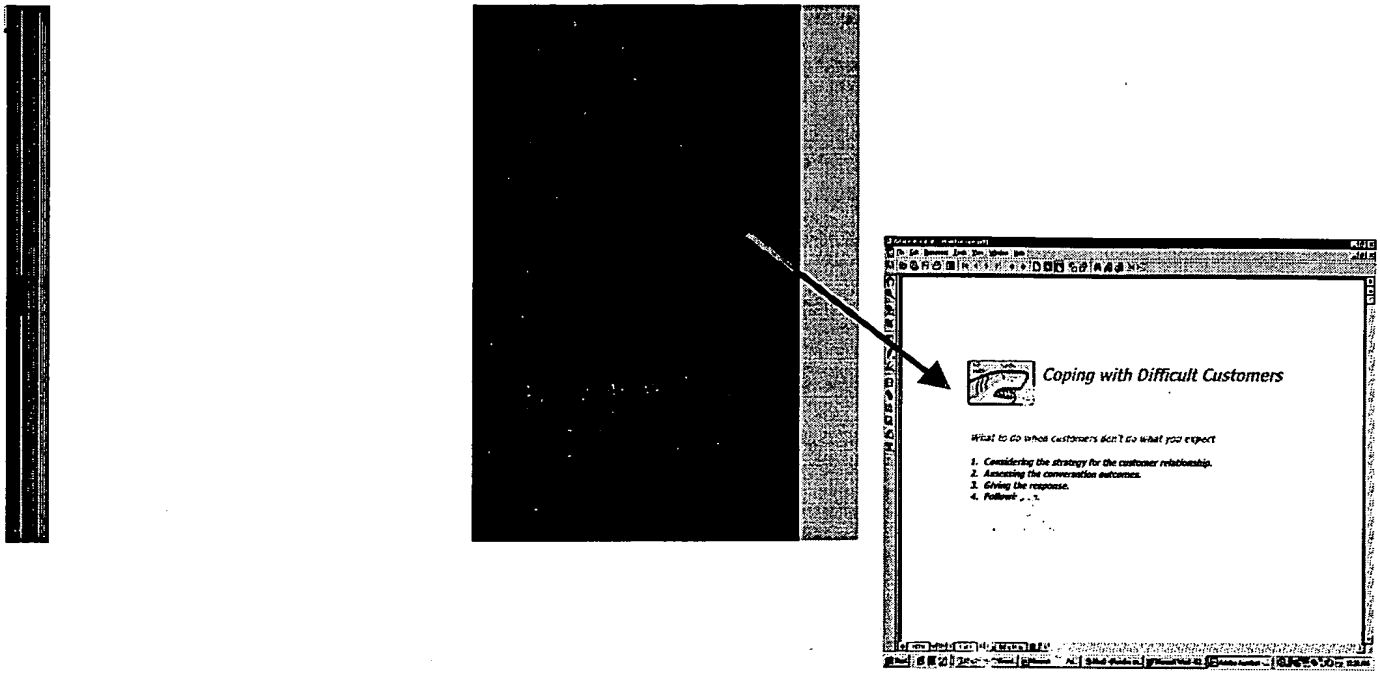

Figure 3

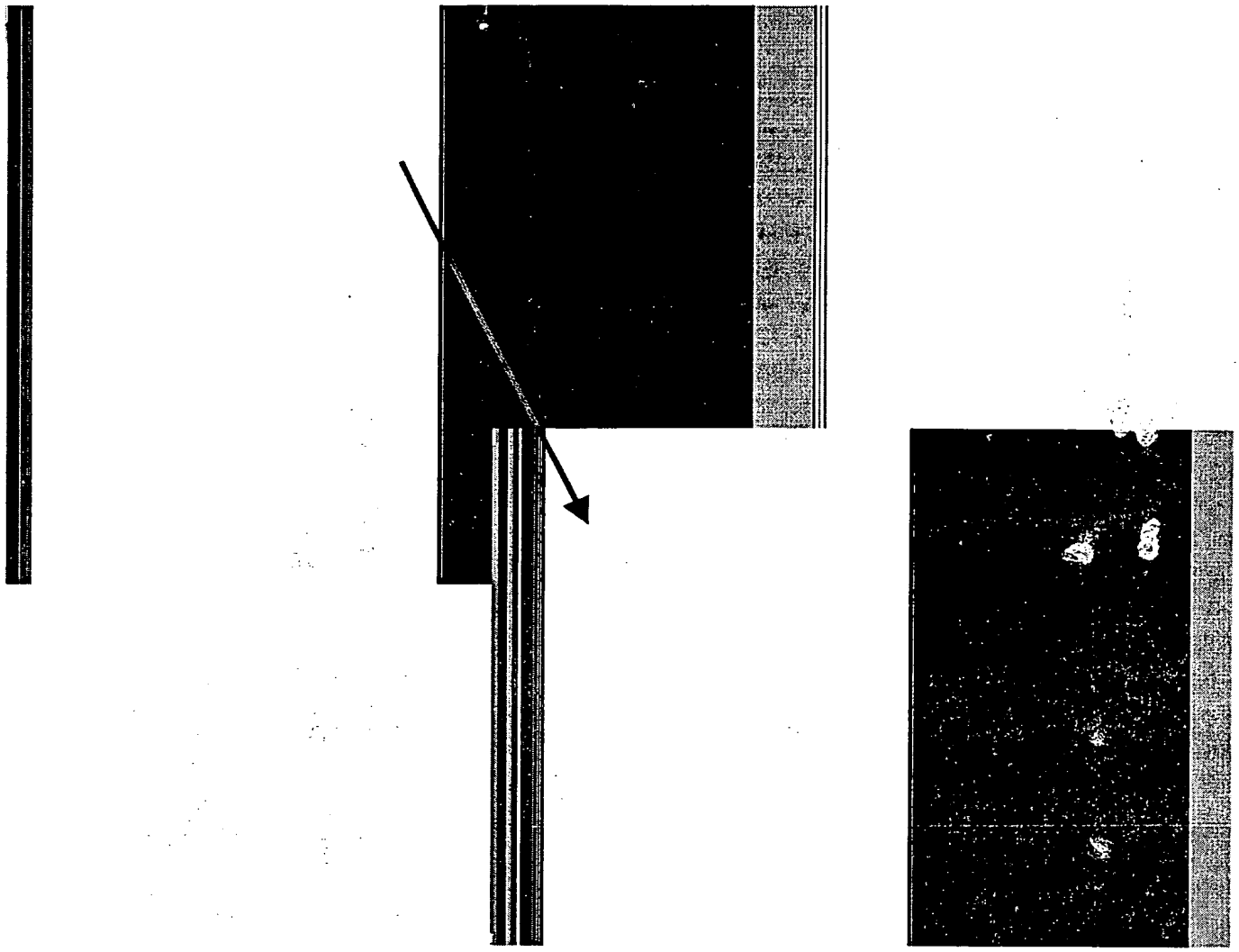

Figure 4

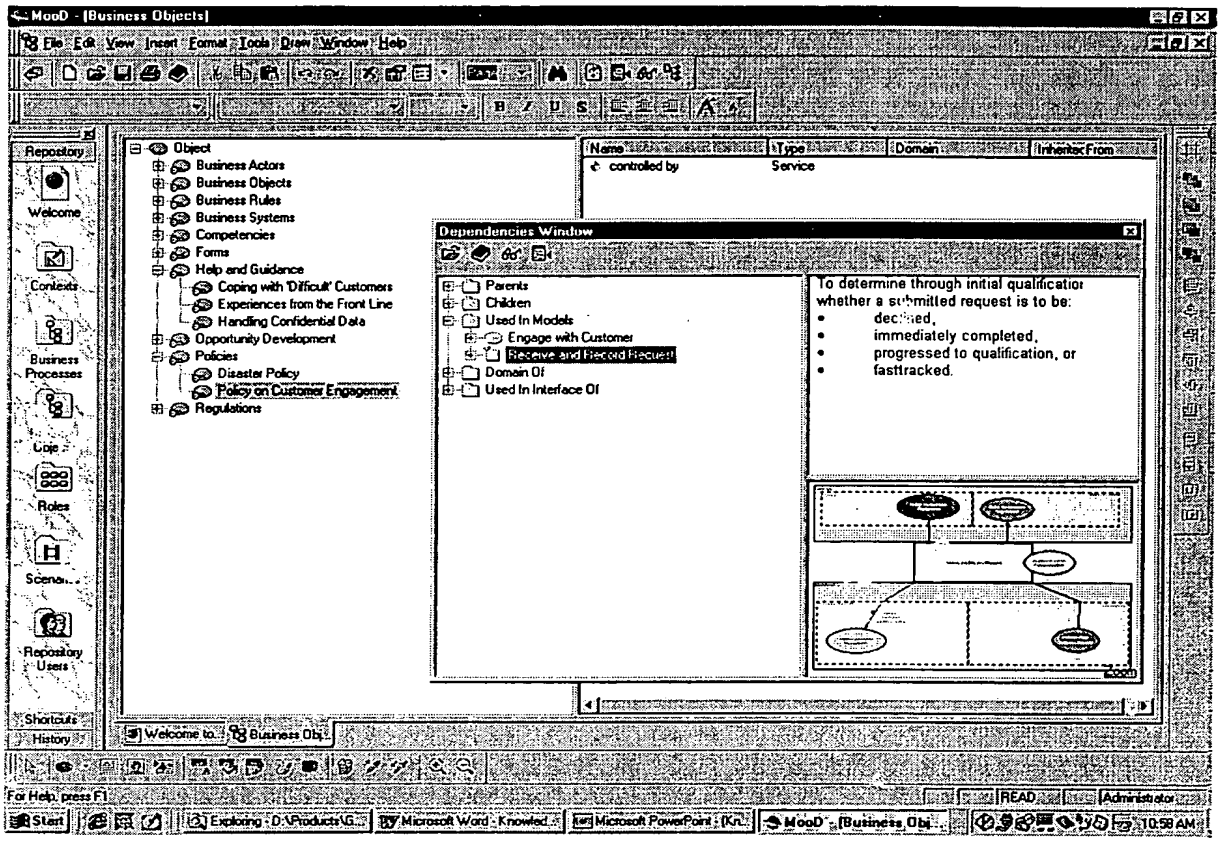
MooD - [Business Objects]
File Edit View Insert Format Tools Draw Window Help
Repository
Welcome
Contexts
Business Processes
Roles
Repository Users
Shortcuts
History
Object
Business Actors
Business Objects
Business Rules
Business Systems
Competencies
Forms
Help and Guidance
Coping with 'Difficult' Customers
Experiences from the Front Line
Handling Confidential Data
Opportunity Development
Policies
Disaster Policy
Policy on Customer Engagement
Regulations
Name
Type
Domain
Inherited From
controlled by
Service
Dependencies Window
Parents
Children
Used In Models
Engage with Customer
Receive and Record Request
Domain Of
Used In Interface Of
To determine through initial qualificatior
whether a submitted request is to be:
immediately completed,
progressed to qualification, or
fasttracked.
Welcome to...
Business Obj...
For Help, press F1
READ
Administrator
Start
Exploring - D:\Products\G...
Microsoft Word - Knowled...
Microsoft PowerPoint - [Kn...
MooD - [Business Obj...
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Figure 5